CHANGING PATTERN OF POPULATION AND DENSITY IN TELANGANA STATE

M. KAMRAJU, M. VANI, T. ANURADHA & D. KRANTI

[1,2]Department of Geography, Osmania University, Hyderabad, Telangana, India

[3]Assistant Professor Department of Geography, Osmania University, Hyderabad, Telangana, India

[4]Research Scholar, Department of Geography, Osmania University, Hyderabad, Telangana, India

ABSTRACT

Apart from a generalized discussion on the trends of population growth in Telangana during the post-Independence decades and its socioeconomic implications, this paper examines in some detail the spatial patterns of population change in Telangana during 1991-2011. The discussion is mainly based on what has emerged on 3 maps depicting percentage change in population change in Telangana during this decade. While areas of rapid growth of the population continue to be associated with migration resulting from: 1) the development of manufacturing industries, mining, trade, and miscellaneous services, all leading to an acceleration in the process of urbanization, 2) the development of irrigation and reclamation of land bringing about increased intensity and extensions in farming, and 3) infiltration from neighboring countries, particularly from Bangladesh. The areas of relatively low growth are mostly those which have suffered a net out-migration induced by the pressure of population and paucity of resources or a desire to seek better avenues of employment elsewhere. A comparison of the spatial patterns of 1991-2011 with those witnessed in precious decades brings out important changes in these patterns which are occurring as a result of the various areas of the country getting into different phases of the second stage of the "demographic transition." With a view to bringing the benefits of socioeconomic progress to the door steps of all sections of the society in all parts of the country, it is necessary to bring about a substantial decline in the birth rate without any further loss of time.

Population density is a measurement of the number of people in an area. It is an average number population density is calculated by dividing the number of people by area. Population density is usually shown as the number of people per square kilometer. The population density of India in 2011 is 382 persons per square kilometer. According to the census 2011 the population of Telangana is 35,0,03,674. The population rank of the State is the 12th in the country. The average population density is during the year 2011 in Telangana state is 306.39 square kilometers. A 60 year dream of the people of Telangana was realized in 2014, when Telangana was formally created by the Parliament of India. Hyderabad is the capital city of the Telangana state. Culturally, the capital city of the state, Hyderabad, lies in the traditional zone of Indian cultures and itself represents a synthesis of North and South Indian culture. The state has 31 districts. Telangana state have an area of 1, 12,386 km^2.

KEYWORDS: Post-Independence, Manufacturing Industries, Infiltration, Demographic Transition, Density, Population, Growth, Pattern, Change

INTRODUCTION

Studying the change in population distribution and density can provide an important basis for regional development and planning. The spatial patterns and driving factors of the change in population density in Telangana were

not clear yet. Therefore, using the population census data in 1991 and 2011, this study firstly analyzed the change of population density in Telangana. One of the important indices of population concentration is the density of population. It is defined as the number of persons per square kilometer. The population density of India in 2011 is 382 persons per square kilometer; the density of population is increasing in all States and Union territories between 1951 and 2011. The major States have a population density of 908 square kilometers in 2011. Bihar is now the first highest densely populated State, the second highest densely populated state is West Bengal. A high increase in the density of population is a great concern as it puts immense pressure on our natural resources. Also, it may be the quality of life.

Due to differences in climatic conditions, availability of resources, agriculture, industrialization, education, capital city States and Union territories of our country largely varied in terms of density. According to the census 2011 the population of Telangana is 35,0,03,674. The population rank of the State is the 12th in the country. The average population density is during the year 2011 in Telangana 311.45 square kilometers. The term density of population was used by Henry in 1837, while preparing railway maps. This is the ratio between population and area. This is used as an indicator to measure concentration of population. Hyderabad district population constituted 11.2 percent of the total Telangana population. Population density is the average number of people per square kilometer. It is a way of measuring population in the district and shows where an area is sparsely or densely populated. Density of population helps us an understanding nature of distribution of population. It is useful in several other ways. It also becomes easier to know the possibilities for development of a region. It indicates the nature of the balance between the population of the region and its natural resources.

LOCATION OF STUDY AREA

Telangana is situated on the Deccan Plateau, in the central stretch of the eastern seaboard of the Indian Peninsula. Its latudinal extension is $15^0 9$' North to $19^0 7$' North and longitude extension is $77^0 3$'East to $81^0 6$' East. It covers 114,840 square kilometers (44,340 sq mi). The region is drained by two major rivers, with about 79% of the Godavari River catchment area and about 69% of the Krishna River catchment area, but most of the land is arid. Hyderabad lies in the traditional zone of Indian cultures and itself represents a synthesis of North and South Indian culture. The state has 31 districts namely Adilabad, Bhadradri (Kothagudem), Jagitial, Jangoan, Jayashankar (Bhupalpalli), Jogulamba (Gadwal), Kamareddy, Karimnagar, Khammam, Kumarambhem (Asifabad), Mahabubnagar, Mahububabbad, Mancherial, Medak, Medchal, Nagarkurnool, Nalgonda, Nirmal, Nizamabad, Peddapalli, Rajanna (Siricilla), Ranga Reddy, Sangareddy, Siddipet, Suryapet, Vikarabad, Wanaparthy, Warangal (Rural), Warangal (Urban), Yadadri, Hyderabad.

Figure 1

OBJECTIVES

The present study has been undertaken with the following objectives.

- To study the density of population in the State.

- To find out the changing pattern of population density in the State.

- To study the density growth rate in the state.

- To find out the changing pattern of density growth rate in the state.

DATA BASE AND METHODOLOGY

The present paper is based on the secondary source data; mainly collected from state Census Handbooks, Socioeconomic Abstract etc. varies statistical techniques are used in the present paper to know the demographic pattern of the study area. Population density is a measurement of the number of people in an area. It is an average number population density is calculated by dividing the number of people by area. Population density is usually shown as the number of people per square kilometer. The period from 1991 to 2011 is selected for the observation of pattern of population density changes. The data was tabulated analyzed and represented in the form of cartographic, statistical diagrams and maps. Population density is calculated using the following formula.

HISTORY OF TELANGANA

Telangana was governed by many rulers, including the Satavahana dynasty (230 BCE to 220 CE), the Kakatiya Dynasty (1083–1323), the Musunuri Nayaks (1326–1356) the Delhi Sultanate, the Bahmani Sultanate (1347–1512), Qutb Shahi dynasty (1512–1687), Mughal Empire (1687–1724) and Asaf Jahi Dynasty (1724–1948).

Early History

The Satavahana dynasty (230 BCE to 220 CE) became the dominant power in this region. It originated from the lands between the Godavari and Krishna rivers and was based at Amaravathi and Dharanikota.[ ] After the decline of the Satavahanas, various dynasties, such as the Vakataka, Vishnukundina, Chalukya, Rashtrakuta and Western Chalukya, ruled the area.

Kakatiya Dynasty

RamagiriFort ruins at Kalvacherla in Karimnagar district is an ancient fort initially built by the Sathavahanas and modified many times by other dynasties till 16th century

Kota Gullu, temple ruins built in the 12th century by Kakatiyas at Ghanpur, Mulug in Warangal district a 14th century fort ruins at Rachakonda in Nalgonda district

The Telangana area experienced its golden age during the reign of the Kakatiya dynasty, which ruled most parts of the present day Andhra Pradesh and Telangana from 1083 to 1323 CE. Rudrama Devi and Prataparudra II were prominent rulers from the Kakatiya dynasty. The dynasty weakened with the attack of Malik Kafur in 1309 and was dissolved after the defeat of Prataparudra by the forces of Muhammad bin Tughluq in 1323.

Qutb Shahi and Asaf Jahi's

The area came under the rule of the Delhi Sultanate in the 14th century, followed by the Bahmani Sultanate. Quli Qutb Mulk, a governor of Golkonda, revolted against the Bahmani Sultanate and established the Qutb Shahi dynasty in 1518. On 21 September 1687, the Golkonda Sultanate came under the rule of the Mughal emperor Aurangzeb after a year-long siege of the Golkonda Fort.

In 1712, Qamar-ud-din Khan was appointed by emperor Farrukhsiyar as the viceroy of Deccan with the title *Nizam-ul-Mulk* (meaning "Administrator of the Realm"). He was later recalled to Delhi, with Mubariz Khan appointed as the viceroy. In 1724, Qamar-ud-din Khan defeated Mubariz Khan to reclaim the *Deccan suba,* establishing it as an autonomous province of the Mughal Empire. He took the name *Asif Jah*, starting what came to be known as the Asif Jahi dynasty. He named the area Hyderabad Deccan. Subsequent rulers retained the title *Nizam ul-Mulk* and were called Asif Jahi Nizams or Nizams of Hyderabad. The Medak and Warangal divisions of Telangana were a part of their realm.

When Asif Jah I died in 1748, there was political unrest due to contention for the throne among his sons, who were aided by opportunistic neighbouring states and colonial foreign forces. In 1769, Hyderabad city became the formal capital of the Nizams. The Nizam Nasir-ud-dawlah, Asaf Jah IV signed the Subsidiary Alliance with the British in 1799 and lost its control over the state's defence and foreign affairs. Hyderabad State became a princely state among the presidencies and provinces of British India.

Post-Independence

When India became independent from the British Empire in 1947, the Nizam of Hyderabad did not want to merge with the Indian Union and wanted to remain independent. The Government of India annexed Hyderabad State on 17 September 1948 after a military operation called Operation Polo. It appointed a civil servant, M. K. Vellodi, as first chief minister of Hyderabad State on 26 January 1950. He administered the state with the help of English-educated bureaucrats from the Madras and Bombay states, which were familiar with British systems of administration, unlike the bureaucrats of Hyderabad state who used a completely different administrative system. The official language of the state was switched from Urdu to English.

In 1952, Dr. Burgula Ramakrishna Rao was elected the chief minister of the Hyderabad State in its first democratic election. During this time, there were violent agitations by some Telanganites to send the Madras state bureaucrats back and implement a rule by the natives (*mulkis*) of Hyderabad.

POPULATION DISTRIBUTION

Population distribution means the pattern of where people live. World population distribution is uneven. Places which are sparsely populated contain few people. Places which are densely populated contain many people. Sparsely populated places tend to be difficult places to live. These are usually placed in hostile environments, e.g. Antarctica. Places which are densely populated are habitable environments, e.g. Europe.

Table 1: Telangana State Population Year Wise

S.No	Name of the District	1991	2001	2011
1	Adilabad	427302	634121	708972
2	Bhadradri (Kothagudem)	718742	1002722	1069261
3	Jagitial	544275	761985	985417

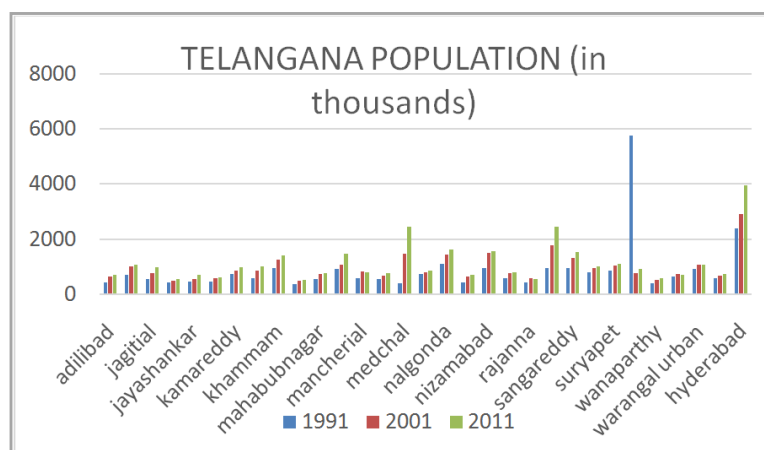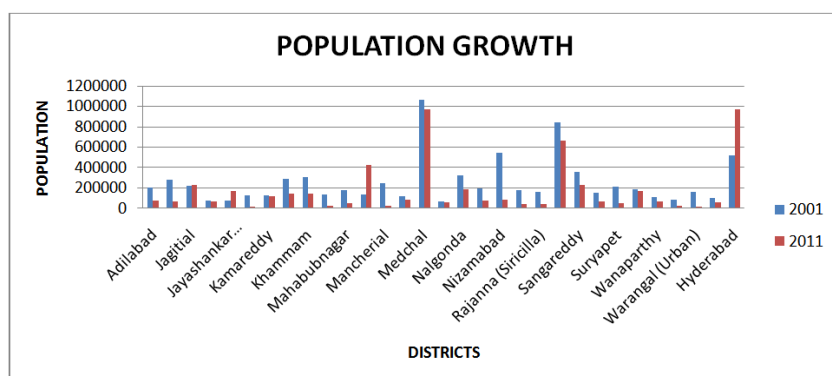| S.No	Name of the District	1991	2001	2011
	Table 1: Contd.			
4	Jangoan	424472	503240	566376
5	Jayashankar (Bhupalpalli)	469300	543400	711434
6	Jogulamba (Gadwal)	465552	594384	609990
7	Kamareddy	730400	854568	972625
8	Karimnagar	580944	868224	1005711
9	Khammam	955059	1260329	1401639
10	Kumarambhem (Asifabad)	356094	492678	515812
11	Mahabubnagar	543753	725004	774549
12	Mahububabbad	930160	1067570	1486777
13	Mancherial	582320	827297	807037
14	Medak	562772	682570	767428
15	Medchal	407584	1474240	240073
16	Nagarkurnool	733944	803184	861766
17	Nalgonda	1103910	1431522	1618416
18	Nirmal	438330	634425	709418
19	Nizamabad	947648	1492224	1571022
20	Peddapalli	583596	760240	795332
21	Rajanna (Siricilla)	428028	587529	552037
22	Ranga Reddy	940797	1780974	2446265
23	Sangareddy	946645	1303288	1527628
24	Siddipet	791776	947952	1012065
25	Suryapet	847645	1056851	1099560
26	Vikarabad	575620	761850	927140
27	Wanaparthy	402424	510024	577758
28	Warangal (Rural)	654675	739500	718537
29	Warangal (Urban)	909755	1072071	1080588
30	Yadadri	188.43581296	680240	739448
31	Hyderabad	2403709	29780450	3943323

Figure 2

Population Growth

In biology, **population growth** is the increase in the number of individuals in a population.

Global human population growth amounts to around 75 million annually, or 1.1% per year. The global population has grown from 1 billion in 1800 to 7 billion in 2012. It is expected to keep growing, and estimates have put the total population at 8.4 billion by mid-2030, and 9.6 billion by mid-2050. Many nations with rapid population

growth have low standards of living, whereas many nations with low rates of population growth have high standards of living.

Table 2: Telangana State Population Growth Year Wise

S.No	Name of District	2001	2011
1	Adilabad	206819	74851
2	Bhadradri (Kothagudem)	283980	66539
3	Jagitial	217710	223432
4	Jangoan	78768	63136
5	Jayashankar (Bhupalpalli)	74100	168034
6	Jogulamba (Gadwal)	128832	15606
7	Kamareddy	124168	118057
8	Karimnagar	287280	137487
9	Khammam	305270	141310
10	Kumarambhem(Asifabad)	136584	23134
11	Mahabubnagar	181251	49545
12	Mahububabbad	137410	419207
13	Mancherial	244976	20260
14	Medak	119798	84858
15	Medchal	1066656	965833
16	Nagarkurnool	69240	58582
17	Nalgonda	327612	186894
18	Nirmal	196095	74993
19	Nizamabad	544576	78798
20	Peddapalli	176644	35092
21	Rajanna (Siricilla)	159501	35492
22	Ranga Reddy	840177	665291
23	Sangareddy	356643	224340
24	Siddipet	156179	64113
25	Suryapet	209206	42709
26	Vikarabad	186230	165290
27	Wanaparthy	107600	67734
28	Warangal (Rural)	84825	20963
29	Warangal (Urban)	162316	8517
30	Yadadri	98944	59208
31	Hyderabad	522536	965278

Figure 3

POPULATION DENSITY

Population density is calculated using the following formula.

$$\text{Population Density} = \frac{\text{Total Population}}{\text{Area (in square kilometer)}}$$

Table 3: Telangana State Population Density Year Wise

S.No	Name of the District	1991	2001	2011
1	Adilabad	102.89	152.69	178.04
2	Bhadradri (Kothagudem)	96.05	134.61	144.62
3	Jagitial	225.70	315.81	343.49
4	Jangoan	194.22	230.22	239.04
5	Jayashankar (Bhupalpalli)	76.11	88.96	98.26
6	Jogulamba (Gadwal)	159.11	203.30	239.21
7	Kamareddy	200.41	234.94	270.97
8	Karimnagar	273.48	408.23	454.04
9	Khammam	219.64	289.79	317.33
10	Kumarambhem (Asifabad)	73.31	101.69	116.00
11	Mahabubnagar	189.90	252.61	292.57
12	Mahububabbad	176.17	202.32	214.32
13	Mancherial	145.49	206.22	206.47
14	Medak	202.89	245.82	267.13
15	Medchal	376.75	1360.47	2299.79
16	Nagarkurnool	106.03	116.50	132.47
17	Nalgonda	155.24	201.57	221.19
18	Nirmal	114.03	165.12	188.22
19	Nizamabad	221.60	348.13	364.93
20	Peddapalli	261.15	340.70	348.66
21	Rajanna (Siricilla)	212.99	291.49	315.12
22	Ranga Reddy	187.50	354.33	493.10
23	Sangareddy	215.92	296.39	353.13
24	Siddipet	218.12	261.84	270.83
25	Suryapet	235.75	293.71	313.26
26	Vikarabad	170.92	225.71	252.63
27	Wanaparthy	187.82	237.42	274.74
28	Warangal (Rural)	301.79	340.36	356.14
29	Warangal (Urban)	695.32	819.55	928.88
30	Yadadri	188.43	220.93	229.94
31	Hyderabad	11077.25	13485.05	13884.94

Figure 4

Figure 5

Figure 6

Variation in The population density is divided into five classes. The figures 2, 4 and 5 show the population density.

The Figure 2 is shows that very low population density in Nagarkurnool, Bhadradri (Kothagudem), Jayashankar (Bhupalpalli), Mancherial, Kumarambhem (Asifabad), Adilabad, Nirmal districts, very low population density in Jagitial, Jangoan, Jogulamba (Gadwal), Kamareddy, Karimnagar, Khammam, Kumarambhem (Asifabad), Mahabubnagar, Mahububabbad, Medak, Nalgonda, Nizamabad, Peddapalli, Rajanna (Siricilla), Ranga Reddy, Sangareddy, Siddipet, Suryapet, Vikarabad, Wanaparthy, Warangal (Rural), Yadadridistricts districts, the average population density in Medchal district, the high population density in Warangal (Urban) district, the very high population density in Hyderabad district during the year of 1991.

The Figure 4 is shows that very low population density in Nagarkurnool, Bhadradri (Kothagudem), Jayashankar (Bhupalpalli), Kumarambhem (Asifabad) districts, the average population density in Adilabad, Jagitial, Jangoan, Jogulamba (Gadwal), Kamareddy, Khammam, Mahabubnagar, Mahububabbad, Mancherial, Medak, Nalgonda, Nirmal, Nizamabad, Peddapalli, Rajanna (Siricilla), Sangareddy, Siddipet, Suryapet, Vikarabad, Wanaparthy, Warangal (Rural), Yadadri districts, the high population density in Ranga Reddy, Karimnagar districts, the very high population density in Medchal, Warangal (Urban), Hyderabad districts during the year of 2001.

The Figure 5 is shows that very low population density in Nagarkurnool, Bhadradri (Kothagudem), Jayashankar (Bhupalpalli), Kumarambhem (Asifabad) districts, low population density in Adilabad, Jagitial, Jangoan, Jogulamba (Gadwal), Kamareddy, Khammam, Mahabubnagar, Mahububabbad, Mancherial, Medak, Nalgonda, Nirmal, Peddapalli, Rajanna (Siricilla), Siddipet, Suryapet, Vikarabad, Wanaparthy, Yadadri districts, the average population density in Sangareddy, Warangal (Rural), Nizamabad districts, the high population density in Ranga Reddy, Karimnagar districts, the very high population density in Hyderabad, Medchal, Warangal (Urban) districts during the year of 2011.

Density Growth Rate

Population density growth rate is calculated using the following formula.

$$\text{Population Density Growth Rate} = \frac{\text{Current year population Density - last year population Density}}{\text{Last year population Density}} * 100$$

Table 4: Telangana State Population Density Growth Rate Year Wise

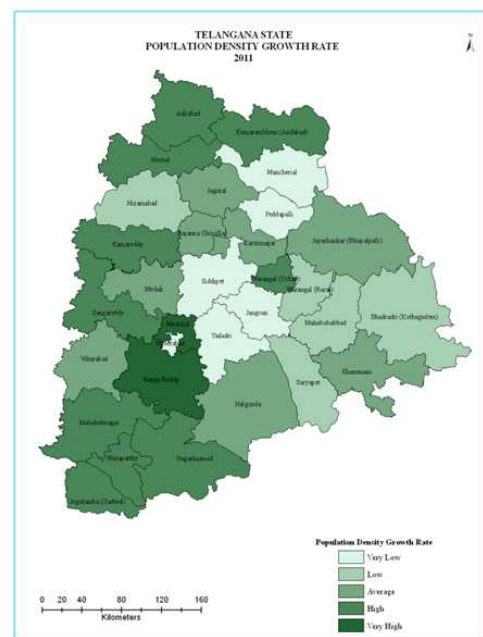| S.No	Name of District	2001	2011
1	Adilabad	48.41	16.60
2	Bhadradri (Kothagudem)	40.14	7.43
3	Jagitial	39.93	8.76
4	Jangoan	18.54	3.83
5	Jayashankar (Bhupalpalli)	16.88	10.46
6	Jogulamba (Gadwal)	27.77	17.67
7	Kamareddy	17.23	15.34
8	Karimnagar	49.27	11.22
9	Khammam	31.94	9.50
10	Kumarambhem (Asifabad)	38.72	14.07
11	Mahabubnagar	33.02	15.82
12	Mahububabbad	14.84	5.93
13	Mancherial	41.74	0.12
14	Medak	21.16	8.67
15	Medchal	261.11	69.04
16	Nagarkurnool	9.87	13.71
17	Nalgonda	29.84	9.73
18	Nirmal	44.80	14.00
19	Nizamabad	57.10	4.83
20	Peddapalli	30.46	2.34
21	Rajanna (Siricilla)	36.86	8.11
22	Ranga Reddy	88.98	39.16
23	Sangareddy	37.27	19.14
24	Siddipet	20.04	3.44
25	Suryapet	24.59	6.66
26	Vikarabad	32.06	11.93
27	Wanaparthy	26.41	15.72
28	Warangal (Rural)	12.78	4.64
29	Warangal (Urban)	17.87	13.34
30	Yadadri	17.25	4.08
31	Hyderabad	21.74	2.97

Figure 7

Figure 8

The figures 6and 7 show the population density growth rate. Variation in the population density growth rate is divided into five classes.

The Figure.6 is shows that very low population density growth rate in Jangoan, Jayashankar (Bhupalpalli), Kamareddy, Mahububabbad, Medak, Nagarkurnool, Siddipet, Warangal (Rural), Warangal (Urban), Yadadri, Hyderabad districts, low population density growth rate in Peddapalli, Mancherial districts, average population density in Bhadradri (Kothagudem), Jagitial, Jayashankar (Bhupalpalli), Karimnagar, Khammam, Mahububabbad, Medak, Nalgonda, Nizamabad, Rajanna (Siricilla), Suryapet, Vikarabaddistricts, the high population density in Ranga Reddy, Karimnagar, Rajanna (Siricilla), Nizamabad, Jagitial, Nirmal, Mancherial, Kumarambhem (Asifabad), Adilabad districts, very high population density in Medchal district during the year of 2001.

The Figure 7 is shows that very low population density growth rate in Hyderabad, Yadadri, Jangoan, Siddipet districts, low population density growth rate in Jogulamba (Gadwal), Wanaparthy, Mahabubnagar, Vikarabad, Nalgonda, Suryapet, Khammam, Peddapalli districts, average population density in Bhadradri (Kothagudem), Sangareddy districts, the high population density in Sangareddy, Kamareddy, Warangal (Urban), Mahabubnagar, Wanaparthy, Jogulamba (Gadwal), Nagarkurnool districts, very high population density in Ranga Reddy, Medchal, Nirmal, Adilabad, Kumarambhem (Asifabad) districts during the year of 2011.

CONCLUSIONS

In three stages Hyderabad district is having the highest population density, but the population density growth rate in Hyderabad is very low compared to other districts. Constantly Hyderabad population density is very high and also the natural resources are imbalances in Hyderabad district. The population density of Telangana is constantly changing on the basis of the above results. Rangareddy and Medchal districts are highest in population density and population density growth rate in every stage because Hyderabad city is expanding into Rangareddy and Medchal districts. Nagarkurnool, Bhadradri (Kothagudem), Jayashankar (Bhupalpalli), Kumarambhem (Asifabad) districts are having a very low population density in three stages. And also the Yadadri, Siddipet, Jangoan districts have very low population density growth rate in every time. The government has to provide basic services and improve the resources in the density areas.

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